

Title (en)  
A device to monitor glow plugs in a vehicle

Title (de)  
Vorrichtung zur Überwachung von Zündkerzen in einem Fahrzeug

Title (fr)  
Dispositif pour contrôler les bougies de préchauffage dans un véhicule

Publication  
**EP 2314863 A1 20110427 (EN)**

Application  
**EP 09173392 A 20091019**

Priority  
EP 09173392 A 20091019

Abstract (en)  
The invention relates to the field of monitoring glow plugs. The device (100) receives a set of engine parameters (104) to control a set of glow plugs (110 to 113). A measuring means (118) measures a set of glow plug parameters. A recording means (120) records selected glow plug parameters and associated engine parameters present at the same time, as history. A life time model computing means (122) continuously analyses the history to compute an aging factor of the glow plugs. The life time model computing means also computes remaining life time of the glow plugs depending upon the specified life time of the glow plugs and the aging factor by computing the ageing factor in dependence of at least two of the a cooling rate, a power density, a corrosion and an erosion. A warning means (124) generates a warning if the remaining life time of the glow plug is less than a pre-defined threshold.

IPC 8 full level  
**F02P 19/02** (2006.01); **F02D 41/22** (2006.01)

CPC (source: EP)  
**F02P 19/027** (2013.01); **F02D 2041/227** (2013.01); **F02D 2041/228** (2013.01)

Citation (applicant)  
US 2008319599 A1 20081225 - PTAK RICHARD [US], et al

Citation (search report)

- [XI] JP 2009047134 A 20090305 - TOYOTA MOTOR CORP
- [XA] DE 102005040439 A1 20070301 - BOSCH GMBH ROBERT [DE]
- [XA] US 2009218330 A1 20090903 - MORITZ RAINER [DE]
- [XA] WO 2007033825 A1 20070329 - BERU AG [DE], et al
- [XA] US 2009193882 A1 20090806 - MORITZ RAINER [DE], et al
- [E] DE 102008002574 A1 20100114 - BOSCH GMBH ROBERT [DE]
- [A] DE 102006005712 A1 20070816 - BOSCH GMBH ROBERT [DE]
- [A] JP S59209037 A 19841127 - TOSHIBA KK
- [A] US 2009037120 A1 20090205 - HIRAMATSU HIROMI [JP]

Cited by  
RU2645402C2; US2014338626A1; US9683536B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**EP 2314863 A1 20110427**

DOCDB simple family (application)  
**EP 09173392 A 20091019**